

Appl. No.: 10/630,129
Amdt. Dated: 01/18/06
Off. Act. Dated: 10/18/05

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended): An apparatus for accommodating a fast change of digital streaming formats or sources in a video server system connected to one or more video display devices over a digital packet-based communications link, comprising:

a video stream controller; and

means associated with said video stream controller for, ~~allowing~~

establishing a connection between said video server and video display devices based on a protocol having a transport portion and a stream portion,

changing the format or source of a digital video stream to change by changing the stream portion of the protocol without changing the transport portion of the protocol;

wherein stream format or source is changed without breaking the communications link to the video display device ~~and while preserving the transport portion of the communications link.~~

2. (currently amended): An apparatus as recited in claim 1, wherein said means comprises:

a source control library;

a streaming library;

wherein said stream controller is connected between said source control library and said streaming library; and

wherein the digital packet-based communications link between an interconnected video display device and the streaming library does not change in response to a video source or video format change.

3. (original): An apparatus as recited in claim 2, wherein the source control library comprises:

- a source route selection module; and
- a plurality of media sources connected to the source route selection module;

wherein the source route selection module selects which media source provides data to the stream controller.

4. (original): An apparatus as recited in claim 3, wherein said media sources comprise at least two of the following:

- an analog video source;
- an Ethernet streaming video source; and
- a hard disk drive.

5. (original): An apparatus as recited in claim 3, wherein said media sources comprise a plurality of analog video sources, and further comprising:

- a plurality of analog video decoders, each analog video decoder connected to a respective analog video source;

- an analog source router multiplexer connected to the analog video decoders;

and

- a plurality of digital compression encoders connected between the analog source router multiplexer and the source route selection module.

6. (original): An apparatus as recited in claim 3, wherein at least one of said media sources comprises an Ethernet streaming video source, and further comprising:

Appl. No.: 10/630,129
Amdt. Dated: 01/18/06
Off. Act. Dated: 10/18/05

an Ethernet streaming video interface connected between the Ethernet streaming video source and the source route selection module.

7. (original): An apparatus as recited in claim 3, wherein at least one of said media sources comprises an audio/visual hard disk drive, and further comprising:
a personal video recorder/file playback module connected between the hard disk drive and the source route selection module.

8. (original): An apparatus as recited in claim 1, wherein the stream controller comprises:
a streaming module interface package connected to the source route selection module.

9. (original): An apparatus as recited in claim 8, wherein the stream controller further comprises:
a universal plug and play (UPnP) software stack connected to the streaming module interface package; and
wherein the network display terminal accesses the UPnP software stack via a network connection.

10. (original): An apparatus as recited in claim 1, wherein the streaming library comprises:
at least one real time streaming protocol/real time transport protocol (RTSP/RTP) streaming module connected to the streaming module interface package.

11. (original): An apparatus as recited in claim 10, wherein the streaming library further comprises:

at least one hypertext transfer protocol (HTTP) streaming module connected to the streaming module interface package.

12. (original): An apparatus as recited in claim 11, wherein the streaming library further comprises:

at least one user datagram protocol (UDP) streaming module connected to the streaming module interface package.

13. (original): An apparatus as recited in claim 12, wherein the network display terminal is connected to at least one of: the RTSP/RTP streaming module, the HTTP streaming module, and the UDP streaming module.

14. (currently amended): An apparatus for accommodating a change of digital streaming formats or sources in a video server system over a digital packet-based communications link, comprising:

a video stream controller configured for establishing a connection based on a protocol having a transport portion and a stream portion;

a source control library configured for changing the format or source of a digital video stream by changing the stream portion of the protocol without changing the transport portion of the protocol;

a streaming library configured for supporting the transport portion of the protocol;
and

a stream controller connected between the source control library and the streaming library;

wherein a streaming connection, established between a network display terminal and the streaming library does not change in response to a video source or video format change.

15. (original): An apparatus as recited in claim 14, wherein the source control library comprises:

- a source route selection module; and
- a plurality of media sources connected to the source route selection module;

wherein the source route selection module selects which media source provides data to the stream controller.

16. (currently amended): An apparatus as recited in claim 15, wherein said media sources comprise at least two of the following:

- an analog video source;
- an analog video source from AV equipment or cable;
- a digital video source;
- an Ethernet streaming video source; and
- an hard disk drive.

17. (original): An apparatus as recited in claim 15, wherein said media sources comprise a plurality of analog video source, and further comprising:

- a plurality of analog video decoders, each analog video decoder connected to a respective analog video source;
- an analog source router multiplexer connected to the analog video decoders;

and

- a plurality of digital compression encoders connected between the analog source router multiplexer and the source route selection module.

18. (original): An apparatus as recited in claim 15, wherein at least one of said media sources comprises an Ethernet streaming video source, and further comprising:

- an Ethernet streaming video interface connected between the Ethernet streaming video source and the source route selection module.

Appl. No.: 10/630,129
Amdt. Dated: 01/18/06
Off. Act. Dated: 10/18/05

19. (original): An apparatus as recited in claim 15, wherein at least one of said media sources comprises an audio/visual hard disk drive, and further comprising:

a personal video recorder/file playback module connected between the hard disk drive and the source route selection module.

20. (original): An apparatus as recited in claim 14, wherein the stream controller comprises:

a streaming module interface package connected to the source route selection module.

21. (original): An apparatus as recited in claim 20, wherein the stream controller further comprises:

a universal plug and play (UPnP) software stack connected to the streaming module interface package; and

wherein the network display terminal accesses the UPnP software stack via a network connection.

22. (original): An apparatus as recited in claim 14, wherein the streaming library comprises:

at least one real time streaming protocol/real time transport protocol(RTSP/RTP) streaming module connected to the streaming module interface package.

23. (original): An apparatus as recited in claim 22, wherein the streaming library further comprises:

at least one hypertext transfer protocol (HTTP) streaming module connected to the streaming module interface package.

Appl. No.: 10/630,129
Amdt. Dated: 01/18/06
Off. Act. Dated: 10/18/05

24. (original): An apparatus as recited in claim 23, wherein the streaming library further comprises:

at least one user datagram protocol (UDP) streaming module connected to the streaming module interface package.

25. (original): An apparatus as recited in claim 24, wherein the network display terminal is connected to at least one of: the RTSP/RTP streaming module, the HTTP streaming module, and the UDP streaming module.

26. (currently amended): A method for managing video streams provided by a home video server, comprising:

receiving a request for streaming content from a network display terminal;

selecting a first stream source for the streaming content;

establishing a transport portion of a streaming protocol connection with the network display terminal;

packetizing the streaming content from the first source according to a first ~~transport-stream~~ streaming format;

transmitting packetized streaming digital content over said transport portion of said streaming protocol connection to the network display terminal; and

~~maintaining the streaming protocol connection and~~ preserving the transport portion of the streaming protocol connection with the network display terminal when a second stream source is selected, or when packetizing is selected according to a second ~~transport-stream~~ streaming format ~~is selected~~.

27. (currently amended): A method as in claim 26, further comprising:

selecting a second source for the streaming content;

packetizing the streaming content from the second source; and

transmitting packetized digital streaming content to the network display terminal over said transport portion of the streaming protocol connection established to transmit the streaming content from the first source.

28. (original): A method as in claim 26, wherein the request for streaming content is received at a stream controller, the stream controller comprising:

a streaming module interface package; and
a universal plug and play (UPnP) software stack connected to the streaming module interface package.

29. (original): A method as in claim 28, wherein the request for streaming content comprises a UPnP request that is received at the UPnP software stack.

30. (original): A method as in claim 26, wherein a stream source is selected using a source route selection module, the source route selection module being connected to a plurality of media sources.

31. (original): A method as in claim 30, wherein the media sources comprise at least two of the following:

an analog video source;
an Ethernet streaming video source; and
a hard disk drive.

32. (original): A method as in claim 26, wherein the streaming protocol connection with the network display terminal is established via a real time streaming protocol/real time transport protocol (RTSP/RTP) streaming module.

Appl. No.: 10/630,129
Amdt. Dated: 01/18/06
Off. Act. Dated: 10/18/05

33. (original): A method as in claim 26, wherein the streaming protocol connection with the network display terminal is established via a hypertext transfer protocol (HTTP) streaming module.

34. (original): A method as in claim 26, wherein the streaming protocol connection with the network display terminal is established via a user datagram protocol (UDP) streaming module.

35. (currently amended): A home video server system, comprising:
a home video server configured for digital packet-based communication with [[:]]
at least one network display terminal ~~connected to the home video server~~;
means for receiving a request for streaming content from the network display terminal;
means for selecting a stream source for the streaming content;
means for establishing a streaming protocol connection with the network display terminal;
wherein said streaming protocol is configured with a transport portion and a stream portion; and
~~means for maintaining an established streaming protocol connection and~~
preserving a transport portion of the streaming protocol connection with the network display terminal when the stream source or format changes.